IN THE CLAIMS

Please amend the claims as follows:

1.   (Currently Amended)   A spatio-temporal filter unit ~~(100),~~ ~~provided with~~comprising a sigma filter ~~(112), to reduce the~~for reducing noise in images, characterized in that the sigma filter ~~(112)~~ comprises one filter kernel ~~(107) designed to operate~~for

5   operating on pixels from both a current image and from ~~the~~ an output ~~(118)~~ of the spatio-temporal filter unit, ~~being~~ said output supplying a temporally recursive filtered image.

2.   (Currently Amended)   ~~A~~ The spatio-temporal filter unit ~~(100)~~ as claimed in Claim 1, characterized in that ~~it~~ said spatio-temporal filter unit further comprises:

—   a spatial pixel buffer ~~(104) to store~~for storing pixels of

5   the current image as supplied to the spatio-temporal filter unit;

—   a spatial pixel selector ~~(106) to select~~for selecting pixels from the spatial pixel buffer ~~(104)~~;

—   a temporal pixel buffer ~~(108) to buffer~~for buffering pixels from the output ~~(118)~~ of the spatio-temporal filter unit,

10   ~~being a temporally recursive filtered image~~; and

—   a temporal pixel selector ~~(110) to select~~for selecting pixels from the temporal pixel buffer ~~(108)~~; ~~and~~,

—wherein the sigma filter ~~(112)~~is coupled to an output of said

spatial pixel selector and to an output of said temporal pixel

15   selection, said ~~comprising~~ one filter kernel ~~(107) designed to~~

~~operate~~operating on the pixels from both the spatial pixel selector

~~(106)~~and the temporal pixel selector ~~(110)~~.

3.   (Currently Amended)   ~~A~~ The spatio-temporal filter unit ~~(100)~~

as claimed in Claim 2, characterized in that ~~it~~ the sigma filter

comprises an adaptive sigma filter ~~(112)~~.

4.   (Currently Amended)   ~~A~~ The spatio-temporal filter unit ~~(100)~~

as claimed in Claim 3, characterized in that an aperture of at

least one of the ~~pixel selectors, being the~~ temporal pixel selector

~~(110)~~and the spatial pixel selector ~~(106), the aperture can be~~

5   ~~adjusted~~is adjustable.

5.   (Currently Amended)   ~~A~~ The spatio-temporal filter unit ~~(100)~~

as claimed in Claim 4, characterized in that at least one of the

~~pixel selectors, being the~~ temporal pixel selector ~~(110)~~and the

spatial pixel selector ~~(106),~~ is designed such that ~~the~~ a distance

5   between the selected pixels is adjustable.

6.   (Currently Amended)   ~~A~~ The spatio-temporal filter unit ~~(200)~~

as claimed in Claim 4, characterized in that ~~it~~ said spatio-

temporal filter unit further comprises a motion detector (224)
designed to detectfor detecting motion, said motion detector

5   controlling and to control the aperture of the temporal pixel
selector (210) based on the detected motion.

7.   (Currently Amended)   A The spatio-temporal filter unit (200)
as claimed in Claim 4, characterized in that it said spatio-
temporal filter unit further comprises a motion estimator (222)
designed to supplyfor supplying motion vectors, said motion

5   estimator controlling a and to control the position of the temporal
pixel selector (210) relatedrelative to the temporal pixel buffer
(208), based on the motion vectors supplied by the motion estimator
(222).

8.   (Currently Amended)   A The spatio-temporal filter unit (200)
as claimed in Claim 4, characterized in that it said spatio-
temporal filter unit further comprises a noise estimator (220)
designed to estimatefor estimating a noise level in the current

5   image and to control, said noise estimator controlling the aperture
of at least one of the pixel selectors, being the temporal pixel
selector (210) and the spatial pixel selector (206), based on the
estimated noise level.

9. (Currently Amended)   A The spatio-temporal filter unit (200) as claimed in Claim 4, characterized in that it said spatio-temporal filter unit further comprises a noise estimator (220) designed to estimatefor estimating a noise level in the current image and to control, said noise estimator controlling thresholds of the adaptive sigma filter (212), based on the estimated noise level.

10. (Currently Amended)   An image display apparatus (300) comprising:

—   receiving means (302) for receiving a signal representing images;

—   a display device (306) for displaying the images; and

—   a spatio-temporal filter unit (100), provided withcomprising a sigma filter (112), to reducefor reducing the noise in the images, characterized in the sigma filter (112) comprises one filter kernel (107) designed to operateoperating on pixels from both a current image and from the an output (118) of the spatio-temporal filter unit, being said output supplying a temporally recursive filtered image.

11. (Currently Amended)   An image display apparatus (300) comprising:

—   receiving means ~~(302)~~ for receiving a signal representing images;

5   —   a display device ~~(306)~~ for displaying the images; and

—   a spatio-temporal filter unit ~~(100), provided with~~comprising a sigma filter ~~(112), to reduce the noise~~for reducing in the images, characterized in that ~~it~~ said spatio-temporal filter unit further comprises:

10   —   a spatial pixel buffer ~~(104) to store~~for storing pixels of a current image as supplied to the spatio-temporal filter unit;

—   a spatial pixel selector ~~(106) to select~~for selecting pixels from the spatial pixel buffer ~~(104)~~;

—   a temporal pixel buffer ~~(108) to buffer~~for buffering

15   pixels from the output ~~(118)~~ of the spatio-temporal filter unit, ~~being~~ said output supplying a temporally recursive filtered image; and

—   a temporal pixel selector ~~(110) to select~~for selecting pixels from the temporal pixel buffer ~~(108); and~~,

20   —~~wherein~~ the sigma filter ~~(112), being~~is an adaptive sigma filter and is coupled to an output of said spatial pixel selector and an output of said temporal pixel selector, said sigma filter comprising one filter kernel ~~(107) designed to operate~~for operating on the pixels from both the spatial pixel selector ~~(106)~~ and the

25   temporal pixel selector ~~(110)~~.